Name _____ Date _____

1. Mikayla has a certain amount of money. If she spends $\$12$, then she has $\frac{1}{5}$ of the original amount left. How much money did Mikayla have originally? Show your work for credit.

2. Three consecutive integers have a sum of 234. What are the integers? Show your work for credit.

3. For each linear equation in the table, select whether the equation has no solution, one solution, or infinitely many solutions.

Equation	No Solution	One Solution	Infinitely Many Solutions
$3x + 5 = 2$			
$12x + 9 = 8x + 1 + 4x$			
$2(x - 3) = 10x - 6 - 8x$			
$5x + 6 = 5x - 4$			

4. Solve each equation or state there is no solution. Show work to receive full credit.

a. $7(2x+5)=4x-9-x$

b. $\frac{x-10}{2}=-18$

c. $12=-4(-6x-3)$

d. $x-4=-9+x$

e. $2(x-3)=4x-6-2x$

f. $\frac{1}{2}(8x+2)=9$

5. Select the equation(s) that have a solution $x = 6$

- A. $3x + 4 = 22$
- B. $\frac{1}{2}(6x - 4) = 3x - 5 + 3$
- C. $3(x - 2) = 2(x + 5) - 10$
- D. $\frac{x+4}{3} + 2 = 4$

6. Fill each box below with a value that would give the equation "no solution"

$8x - 3x + 2 - x =$ ☐ $x +$ ☐

7. Jennifer is saving money to buy a bike. The bike costs $245. She has $125 saved and each week she adds $15 to her savings. Select each of the equations below that could represent this situation (when x represents weeks)

- A. $125 = 245 - 15x$
- B. $\frac{245-125}{15} = x$
- C. $245 = 125 + 15x$
- D. $125 + x + 15 = 245$